

Supplemental Amendment under 37 C.F.R. § 1.111
Application No. 10/511,174

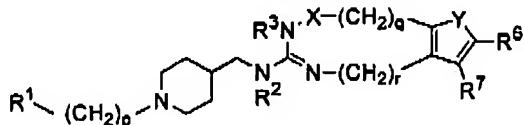
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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A compound represented by the following formula (I):



(I)

wherein R¹ represents phenyl, C₃-C₈ cycloalkyl or an aromatic heterocyclic group having 1-3 atoms selected from the group consisting of oxygen, sulfur and nitrogen as hetero atoms,

the phenyl or aromatic heterocyclic group of R¹ may optionally fuse with a benzene ring or aromatic heterocyclic group having 1-3 atoms selected from the group consisting of oxygen, sulfur and nitrogen as hetero atoms to form a fused ring,

the phenyl, C₃-C₈ cycloalkyl or aromatic heterocyclic group, or fused ring, in R¹ may be unsubstituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, cyano, nitro, carboxyl, C₁-C₆ alkyl, C₃-C₈ cycloalkyl, C₂-C₆ alkenyl, C₁-C₆ alkoxy, C₁-C₆ alkylthio, C₃-C₅ alkylene, C₂-C₄ alkyleneoxy, C₁-C₃ alkylenedioxy, phenyl, phenoxy, phenylthio, benzyl, benzyloxy, benzoylamino, formyl, C₂-C₇ alkanoyl, C₂-C₇ alkoxy carbonyl, C₂-C₇ alkanoyloxy, C₂-C₇ alkanoylamino, C₁-C₆ alkylsulfonyl, C₃-C₈ (alkoxycarbonyl)methyl, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino, carbamoyl, C₂-C₇ N-alkylcarbamoyl, C₄-C₉ N-cycloalkylcarbamoyl, N-phenylcarbamoyl, piperidylcarbonyl,

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morpholinylcarbonyl, pyrrolidinylcarbonyl, piperazinylcarbonyl, N-methoxycarbamoyl, (formyl)amino and ureido, and

the substituent of the phenyl, C₃-C₈ cycloalkyl or aromatic heterocyclic group, or fused ring, of R¹ may be unsubstituted, or substituted with one or more substituents selected from the group consisting of C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, phenyl, C₃-C₅ alkylene, C₃-C₈ cycloalkyl, C₃-C₈ cycloalkenyl, C₁-C₆ alkoxy, C₁-C₆ alkylthio, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino, pyrrolidinyl, piperidyl, C₃-C₇ lactam, carbamoyl, C₂-C₇ N-alkylcarbamoyl, C₂-C₇ alkoxycarbonyl, carboxyl, hydroxy, benzoyl, cyano, trifluoromethyl, halogen and *tert*-butoxycarbonylamino,

provided that when R¹ is C₃-C₈ cycloalkyl, the substituent does not include amino, mono(C₁-C₆ alkyl)amino or di(C₁-C₆ alkyl)amino;

p represents an integer of 1-6;

R² and R³ may be the same or different and each independently represents hydrogen, C₁-C₆ alkyl or phenyl,

where the C₁-C₆ alkyl or phenyl group of R² and R³ may be unsubstituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, C₁-C₆ alkyl, C₂-C₇ alkoxycarbonyl, amino, carbamoyl, carboxyl, cyano and C₁-C₆ alkoxy;

X represents -CO-, -SO₂-, -CH₂-, -CS- or a single bond;

q represents 0 or 1;

r represents 0 or 1;

Y represents -(R⁴)C=C(R⁵)-, -S- or -NR⁸-;

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R⁴, R⁵, R⁶ and R⁷ may be the same or different, and each independently represents hydrogen, a halogen, hydroxy, cyano, nitro, carboxyl, C₁-C₆ alkyl, C₃-C₈ cycloalkyl, C₂-C₆ alkenyl, C₁-C₆ alkoxy, C₁-C₆ alkylthio, C₃-C₅ alkylene, C₂-C₄ alkyleneoxy, C₁-C₃ alkylenedioxy, phenyl, phenoxy, phenylthio, phenylsulfonyl, benzyl, benzyloxy, benzoylamino, formyl, C₂-C₇ alkanoyl, C₂-C₇ alkoxycarbonyl, C₂-C₇ alkanoyloxy, C₂-C₇ alkanoylamino, C₄-C₁₀ cycloalkanoylamino, C₃-C₇ alkenoylamino, C₁-C₆ alkylsulfonyl, C₁-C₆ alkylsulfonylamino, C₃-C₈ (alkoxycarbonyl)methyl, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino, carbamoyl, C₂-C₇ N-alkylcarbamoyl, C₄-C₉ N-cycloalkylcarbamoyl, N-phenylcarbamoyl, N-(C₇-C₁₂ phenylalkyl)carbamoyl, piperidylcarbonyl, morpholinylcarbonyl, pyrrolidinylcarbonyl, piperazinylcarbonyl, N-methoxycarbamoyl, sulfamoyl, C₁-C₆ N-alkylsulfamoyl, (formyl)amino, (thioformyl)amino, ureido or thioureido,

where the aforementioned groups of R⁴, R⁵, R⁶ and R⁷ each may be independently unsubstituted, or substituted with one or more substituents selected from the group consisting of C₁-C₆ alkyl, C₂-C₆ alkenyl, C₂-C₆ alkynyl, phenyl, C₃-C₅ alkylene, C₃-C₈ cycloalkyl, C₃-C₈ cycloalkenyl, C₁-C₆ alkoxy, (C₁-C₆ alkoxy)(C₁-C₆ alkoxy), phenyl(C₁-C₆ alkoxy), C₁-C₆ alkylthio, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino, pyrrolidinyl, piperidyl, (C₂-C₇ alkanoyl)piperidyl, C₃-C₇ lactam, carbamoyl, C₂-C₇ N-alkylcarbamoyl, C₄-C₉ N-cycloalkylcarbamoyl, N-phenylcarbamoyl, N-(C₇-C₁₂ phenylalkyl)carbamoyl, C₂-C₇ alkanoylamino, C₂-C₇ alkoxycarbonyl, carboxyl, hydroxy, benzoyl, cyano, trifluoromethyl, halogens, *tert*-butoxycarbonylamino, C₁-C₆ alkylsulfonyl and heterocycles or aromatic heterocycles (where a heterocycle or aromatic heterocycle has 1-3 atoms selected from the group

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consisting of oxygen, sulfur and nitrogen as hetero atoms, and may be substituted with C₁-C₆ alkyl); and

R⁸ represents hydrogen or C₁-C₆ alkyl,

where the C₁-C₆ alkyl group of R⁸ may be unsubstituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, cyano, nitro, carboxyl, carbamoyl, mercapto, guanidino, C₃-C₈ cycloalkyl, C₁-C₆ alkoxy, C₁-C₆ alkylthio, phenyl (where phenyl may be substituted, or substituted with one or more substituents selected from the group consisting of halogens, hydroxy, C₁-C₆ alkyl, C₁-C₆ alkoxy and benzyloxy), phenoxy, benzyloxy, benzyloxycarbonyl, C₂-C₇ alkanoyl, C₂-C₇ alkoxycarbonyl, C₂-C₇ alkanoyloxy, C₂-C₇ alkanoylamino, C₂-C₇ N-alkylcarbamoyl, C₂-C₆ alkylsulfonyl, amino, mono(C₁-C₆ alkyl)amino, di(C₁-C₆ alkyl)amino and ureido,

a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof.

2. (original): A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -SO₂-.

3. (original): A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -CO-.

4. (original): A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -CH₂-.

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5. (original): A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is -CS-.

6. (original): A compound according to claim 1, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein X in formula (I) is a single bond.

7. (original): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y in formula (I) is -(R⁴)C=C(R⁵)-.

8. (original): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y in formula (I) is -S-.

9. (original): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y in formula (I) is -NR⁸.

10. (previously presented): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R¹ in formula (I) is substituted or unsubstituted phenyl.

11. (previously presented): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R² in formula (I) is hydrogen.

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12. (previously presented): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein R³ in formula (I) is hydrogen.

13. (previously presented): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein q=0 and r=0 in formula (I).

14. (previously presented): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein q=1 and r=0 in formula (I).

15. (previously presented): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein q=0 and r=1 in formula (I).

16. (previously presented): A compound according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein p=1 in formula (I).

17. (original): A compound according to claim 2, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y is - (R⁴)C=C(R⁵)-, R¹ is substituted or unsubstituted phenyl, R² is hydrogen, R³ is hydrogen, q=0, r=0 and p=1 in formula (I).

18. (original): A compound according to claim 3, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein Y is -

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$(R^4)C=C(R^5)-$, R^1 is substituted or unsubstituted phenyl, R^2 is hydrogen, R^3 is hydrogen, $q=0$,
 $r=0$ and $p=1$ in formula (I).

19. (original): A compound according to claim 4, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1-C_6 alkyl adduct thereof, wherein Y is -
 $(R^4)C=C(R^5)-$, R^1 is substituted or unsubstituted phenyl, R^2 is hydrogen, R^3 is hydrogen, $q=0$,
 $r=0$ and $p=1$ in formula (I).

20. (original): A compound according to claim 6, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1-C_6 alkyl adduct thereof, wherein Y is -
 $(R^4)C=C(R^5)-$, R^1 is substituted or unsubstituted phenyl, R^2 is hydrogen, R^3 is hydrogen, $q=0$,
 $r=0$ and $p=1$ in formula (I).

21. (original): A compound according to any one of claims 17 to 20, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1-C_6 alkyl adduct thereof, wherein R^4 and R^5 in formula (I) may be the same or different and each is independently hydrogen, a halogen, hydroxy, cyano, nitro, carboxyl, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_7 alkoxycarbonyl, C_2-C_7 alkanoylamino, C_1-C_6 alkylsulfonyl, amino, carbamoyl, C_2-C_7 N-alkylcarbamoyl, sulfamoyl or C_1-C_6 N-alkylsulfamoyl.

22. (original): A compound according to any one of claims 17 to 20, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C_1-C_6 alkyl adduct thereof, wherein R^4 and R^5 in formula (I) may be the same or different and each is independently a halogen, hydroxy, cyano, nitro, C_1-C_6 alkyl, C_1-C_6 alkoxy, C_2-C_7 alkoxycarbonyl, C_1-C_6 alkylsulfonyl or C_1-C_6 N-alkylsulfamoyl.

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23. (previously presented): A compound according to any one of claims 17 to 20, a pharmaceutically acceptable acid adduct thereof, or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof, wherein the substituents of R¹ in formula (I) above may be the same or different and is independently a halogen, hydroxy, cyano, nitro, C₁-C₆ alkyl or C₁-C₆ alkoxy.

24. (previously presented): A pharmaceutical composition with CCR3 antagonism, which comprises as an effective ingredient thereof a compound represented by formula (I) above according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof; and a pharmaceutically acceptable carrier.

25. (currently amended): A method for treatment of a disease or condition selected from the group consisting of bronchial asthma, allergic rhinitis, atopic dermatitis, urticaria, contact dermatitis, allergic conjunctivitis, inflammatory bowel disease, Acquired Immune Deficiency Syndrome, eosinophilia, eosinophilic gastroenteritis, eosinophilic enteropathy, eosinophilic fasciitis, eosinophilic granuloma, eosinophilic pustular folliculitis, eosinophilic pneumonia and eosinophilic leukemia prophylaxis and/or treatment of a disease associated with CCR3, which comprises comprising administering an effective amount of a compound represented by formula (I) according to any one of claims 1 to 6, a pharmaceutically acceptable acid adduct thereof or a pharmaceutically acceptable C₁-C₆ alkyl adduct thereof.

26 - 30 (canceled).